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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/616,903 | 07/10/2003 | Joost Alexander Spierenburg | U 014712-9 | 3487 |

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LADAS & PARRY
26 WEST 61ST STREET
NEW YORK, NY 10023

EXAMINER

JOHNS, ANDREW W

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|-----------------------------|--|
| Office Action Summary | Application No. 10/616,903 | Applicant(s) SPIERENBURG | |
| | Examiner Andrew W. Johns | Art Unit 2621 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 17 is/are allowed.
6) ☒ Claim(s) 1-16 and 18-24 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 7/10/03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>7/10/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings filed on 10 July 2003 are acceptable subject to correction of the informalities indicated on the attached "Notice of Draftsperson's Patent Drawing Review," PTO-
5 948. In order to avoid abandonment of this application, correction is required in reply to the Office action. The correction will not be held in abeyance.

Claim Rejections - 35 U.S.C. § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

10 The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-11, 13-16, 18 and 20-24 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

15 In claim 1, the recitation of "...a document, such as bonds or other documents the authenticity of which is of importance,..." in lines 1-3 is unclear and indefinite because it is unclear whether the claim is intended to be specifically limited to "bonds or other documents the authenticity of which is of importance" or whether it broadly encompasses any "document." Therefore, the exact scope of the claimed subject matter cannot be readily determined from the
20 claim language, and claim 1 fails to specifically point out and distinctly claim applicant's invention.

In claim 2, the recitation of "the security characteristic" at lines 1-2 is ambiguous, because it is unclear whether this recitation refers to the "first security characteristic" or the "second security characteristic," each of which is defined in claim 1, from which claim 2

depends. Therefore, it is unclear which of these characteristics is further defined by the language of claim 2, so that claim 2 also fails to specifically point out and distinctly claim applicant's invention.

5 In claim 13, the recitation of "...a frequency of between 150 and 400 dpi, preferably between 250 and 400 dpi..." at lines 3-4, and the recitation of "...a resolution that is higher than 400 dpi, preferably higher than 800 dpi..." at line 6 are each confusing and indefinite. Specifically, it is unclear whether the claims are limited to the preferred range, or whether they encompass the broader range. Thus the exact scope of the claimed subject matter cannot be readily determined, and the claim language fails to clearly and distinctly point out applicant's
10 invention.

In claim 15, at line 3, the recitation of "the original image" is indefinite because no such "original image" is recited or defined previously in the claim language, so that it is unclear what image is referred to and/or modified by this recitation.

15 In claim 18, the recitation of "the first security image" at line 5 and of "the second security image" at lines 6-7, are both indefinite because no such "first" or "second" security images are recited or defined in the preceding claim language. Therefore, it is unclear what images are referred to by these recitations and the claim fails to clearly point out applicant's invention. It is believed that replacing the term "image" in each of these recitations with the term "characteristics" would resolve this issue, as the language of claim 1 clearly provides
20 adequate support for the recitations of first and second security characteristics.

In claim 20, at line 1, the recitation "carrier for holding digital data, such as a hard disk, optical disk, computer memory..." is confusing and indefinite. Specifically, it is unclear whether the claimed invention is limited to the specific carriers listed, or whether it more broadly can

encompass any carrier for holding digital data. Thus the exact scope of the claimed subject matter cannot be readily determined, and the claim language fails to clearly and distinctly point out applicant's invention.

Finally, claims 3-11, 14, 16 and 21-24 are each variously dependent from indefinite parent claims, so that they are also indefinite.

Claim Rejections - 35 U.S.C. § 101

4. 35 U.S.C. § 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-16 and 20-22 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-16 and 20 are directed towards a "digital security image." While these claims include language that suggests that this image is intended to be used on a document, the claims are not actually directed towards the document itself, so that they do not define an actual product of manufacture (i.e., a document carrying the image). Instead these claims are directed toward a digital image, which is descriptive material or data. Descriptive material can be classified as either functional or non-functional. Functional descriptive material (i.e., computer programs or specific data structures) impart specific functionality on a general purpose computer and serve to modify the general purpose computer so that it becomes a specialized computer system. However, functional descriptive material, *per se*, is not a tangible product of manufacture, so that functional descriptive material is only considered statutory when embodied in a computer-readable storage medium so as to constitute a tangible product of manufacture. Non-functional descriptive material is *never* considered to be statutory subject matter, in that it imparts no new

and useful functionality on a general purpose system and only distinguishes over other descriptive material by the descriptive content. See M.P.E.P. § 2106.

The digital image variously defined in claims 1-16 and 20 does not impart any functionality on a general purpose computer, so that it constitutes non-functional descriptive material, so that these claims are directed towards non-statutory subject matter.

Claim 21 is directed towards “software,” which constitutes functional descriptive material. However, claim 21 does not recite this software as being specifically embodied in a computer-readable storage medium, so that claim 21 does not define a statutory product of manufacture and is considered to be directed towards non-statutory subject matter. While claim 22 defines “[a] carrier provide with software,” this language fails to clearly stipulate that the “carrier” is a computer-readable storage medium. Because the “carrier” could encompass media that are not computer-readable, this claim fails to define a product of manufacture that would enable the software to impart its functionality on a general purpose computer. Therefore, claim 22 is also considered to be directed towards non-statutory subject matter.

Claim Rejections - 35 U.S.C. § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 4, 8-9 and 20-24 are rejected under 35 U.S.C. § 102(e) as being anticipated by Rhoads et al. '350 (US 6,574,350 B1).

Rhoads et al. '350 teaches a digital security image to be arranged on or in a carrier, particularly a document, such as bonds or other documents the authenticity or origin or which is of importance (column 1, lines 31-32; column 3, lines 29-31), and having at least a first and second security characteristic (column 5, lines 54-55; first and second watermarks of differing robustness or strength) visually almost imperceptibly incorporated in the digital security image (column 4, lines 11-24; watermark avoids problems associated with visible security measures; column 4, lines 42-43; watermark is imperceptible), wherein the first security characteristic is detectably copied in a copy when copying the carrier (column 5, lines 55-58; robust watermark will be detectable in a copy) and the second security characteristic is not copied onto said copy when copying the carrier (column 5, lines 58-62; the less robust watermark will not be detectable in the copy), as required by claim 1.

Furthermore, Rhoads et al. '350 further teaches that an image or part of an image visually almost imperceptually comprises the first and second security characteristic (column 1, lines 31-32; document image is watermarked; column 4, lines 11-24; watermark avoids problems associated with visible security measures; column 4, lines 42-43; watermark is imperceptible), as defined in claim 4; the original image is a color image and the security characteristics are incorporated into at least one colour component of the original image (column 5 lines 1-3), as further required by claims 8-9; and a computer or software for detecting the security characteristics (column 4, lines 33-41), as further defined by claims 21-23. Finally, Rhoads et al. '350 teaches a carrier bearing the digital security image defined above (i.e. a document; column

31-35), as further required by claims 20 and 24. Therefore Rhoads et al. '350 meets each of the limitations of these claims and anticipates the claimed invention.

8. Claim 19 is rejected under 35 U.S.C. § 102(b) as being anticipated by Storey (US 5,530,772 A).

5 Storey teaches a device for detecting the security characteristics (column 3, lines 24-30) in or on a carrier, particularly a document, or an image on a carrier (i.e., bank-notes; column 1, line 37), in which the device has been provided with a recording device (20 in Figure 1) for recording an image of the document or the image in computer-processable form (column 2, lines 28-33), a computer connected to the recording device (i.e., elements 24-30 in Figure 1), which
10 computer has been provided with a memory (24 in Figure 1), a calculating unit (26 in Figure 1) provided with software (i.e., a programmed microprocessor; column 2, lines 39-40) for calculating the Fourier transformed of the image in the memory (column 2, lines 34-36), and display means for displaying the authenticity of the image or carrier (32 in Figure 1; column 2, lines 45-47), as required by claim 19, so that Storey anticipates the claimed invention.

15 ***Allowable Subject Matter***

9. Claim 17 is allowed.

10. Claim 18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

20 ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rhoads et al. '876 provides similar teachings to Rhoads et al. '350 applied above. Spannenburg '627 is an English language equivalent to the foreign language document cited by

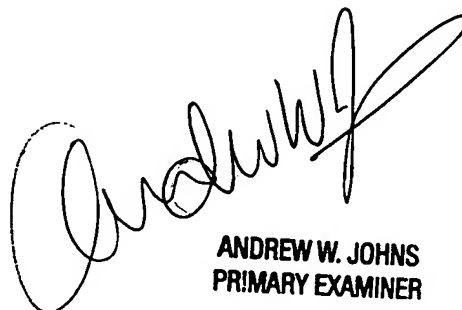
applicant in the Information Disclosure Statement filed 10 July 2003. Hanna and Brugada each teaches the use of security characteristics on document images.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Johns whose telephone number is (703) 305-4788. The examiner is scheduled to move to the Alexandria Headquarters in February/March 2005. After the move, the examiner's telephone number will be (571) 272-7391. The examiner is normally available Monday through Friday, at least during the hours of 9:00 am to 3:00 pm Eastern Time. The examiner may also be contacted by e-mail using the address: andrew.johns@uspto.gov. (Applicant is reminded of the Office policy regarding e-mail communications. See M.P.E.P. § 502.03)

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Leo Boudreau, can be reached on (703) 305-4706. The fax phone number for this art unit is (703) 872-9306. In order to ensure prompt delivery to the examiner, all unofficial communications should be clearly labeled as "Draft" or "Unofficial."

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center Receptionist whose telephone number is (703) 305-4700.

A. Johns
7 January 2005



ANDREW W. JOHNS
PRIMARY EXAMINER